

WHAT IS CLAIMED IS:

1. A method for accessing digital subscriber line performance data, the method comprising:
 - receiving a requested telephone number corresponding to a digital subscriber line element;
 - mapping the telephone number to a port address for a digital subscriber line access multiplexer (DSLAM) in communication with the digital subscriber line element, the digital subscriber line element located remotely from the DSLAM;
 - sending an interrogation request to the port address of the DSLAM to interrogate the digital subscriber line element;
 - collecting raw performance data of the digital subscriber line element in response to the interrogation request;
 - converting the raw performance data to analyzed performance data; and
 - displaying the analyzed performance data.
2. The method of claim 1, further comprising processing the raw performance data to identify faulty operation indicators with respect to the digital subscriber line element.
3. The method of claim 2, wherein the faulty operation indicators include bridged tap faults, single frequency interference faults, and disturber circuit faults.
4. The method of claim 2, wherein the faulty operation indicators correspond to a condition that reduces a data rate of the digital subscriber line element and further comprising reporting the faulty operation indicators.

5. A method for accessing digital subscriber line data, the method comprising:
receiving a requested telephone number corresponding to a digital subscriber line
element;
mapping the telephone number to a port address associated with network
equipment supporting the digital subscriber line element, the digital
subscriber line element located remotely from the network equipment;
sending a provisioning status request to the port address to interrogate the digital
subscriber line element;
collecting real-time provisioning data of the digital subscriber line element in
response to the interrogation request;
converting the real-time provisioning data to analyzed provisioning status data;
and
displaying the analyzed provisioning status data.

6. The method of claim 5, wherein the requested telephone number is received via
a web browser interface provided by a gateway server and wherein the telephone number
is mapped to the port address by a broadband server responsive to the gateway server.

7. The method of claim 6, further comprising communicating the port number to a
regional server.

8. The method of claim 7, further comprising sending a data request from the
regional server to a network equipment management system coupled to the network
equipment.

9. The method of claim 6 wherein the broadband server has an extensible markup
language interface to an application client server.

10. The method of claim 9, wherein an application having access to the broadband
server and a user of the web browser each have access to a common set of analytical tools
with respect to the provisioning status data.

11. The method of claim 10, wherein a first entity uses the web browser while a second entity is using the application for concurrent operation of the broadband server and concurrent access of network equipment data.

12. The method of claim 11, wherein the first entity is an internet service provider and the second entity is a local exchange carrier.

13. The method of claim 5, wherein provisioning status data is selected from the group consisting of powered on, powered off, attempting to synchronize, and in synchronization.

14. The method of claim 5, wherein the provisioning status data includes circuit provisioning parameters selected from the group consisting of equipment port status, cross connect status, alarm status, and in-service status.

15. The method of claim 5, further comprising polling a plurality of provisioning data for a plurality of deployed network equipment to crosscheck provisioned assignment data used in connection with the telephone number to port mapping with field configurations of the deployed network equipment.

16. The method of claim 15 wherein the deployed network equipment is located in a geographically diverse area including a plurality of different states.

17. The method of claim 5, further comprising creating a log file to record historical trouble events and comments, the log file accessible to a plurality of operational personnel working groups.

18. A method for accessing digital subscriber line performance data, the method comprising:

receiving a telephone number via a browser input in response to a data service subscriber problem investigation request, the telephone number corresponding to a broadband data transport element;
mapping the telephone number to a port address for network equipment associated with the broadband data transport element;
sending an interrogation request to the port address to interrogate the network equipment to retrieve real-time performance data of the broadband data transport element;
collecting raw performance data of the broadband data transport element in response to the interrogation request;
converting the raw performance data to analyzed performance data using a set of analysis rules; and
displaying the analyzed performance data.

19. The method of claim 18, further comprising processing the raw performance data to identify fault conditions of the broadband data transport element.

20. The method of claim 19, wherein the broadband transport element is a data modem.

21. The method of claim 20, wherein the data modem is an asynchronous digital subscriber line (ADSL) modem.

22. The method of claim 18, wherein the raw performance data is collected while the broadband transport element remains in operation.

23. A system comprising:

- a first server having an input to receive a telephone number from a web browser interface and having an output to provide performance analysis data associated with at least one of a plurality of network elements that form a distributed and geographically diverse data communication system;
- a second server responsive to the first server, the second server including logic to convert telephone numbers to port addresses for network elements of the communication system, the second server having an interface to communicate with an application server, the second server responsive to a communication circuit provisioning database and a network discovery and synchronization process;
- a plurality of regional servers, each of the plurality of regional servers responsive to the second server; and
- a plurality of network element management systems respectively coupled to each of the plurality of regional servers, each of the plurality of network element management systems coupled to at least one network system element, each of the network system elements supporting at least one of the plurality of network elements.

24. The system of claim 23, wherein the network element is customer premises equipment and wherein the network system element is a multiplexer.

25. The system of claim 24, wherein the customer premises equipment is a digital subscriber line modem and wherein the multiplexer is a digital subscriber line access multiplexer.

26. The system of claim 23, wherein at least one of the regional servers includes a skeleton portion and a collection engine portion, the collection engine configured to interrogate and collect data from a network element management system.

27. The system of claim 23, further comprising a first firewall between the first server and the second server and a second firewall between the second server and at least one of the plurality of regional servers.

28. The system of claim 23, further comprising an internet service provider interface to access the first server remotely via the web browser interface.

29. The system of claim 23, wherein the first server input receives the telephone number in response to a data service subscriber problem investigation request, the second server mapping the telephone number to the port address and sending the interrogation request to the port address to interrogate the network equipment to retrieve real-time performance data, one of the regional servers collecting raw performance data of at least one of the network elements in response to the interrogation request, wherein the second server includes logic to convert the raw performance data to analyzed performance data using a set of analysis rules.

30. The system of claim 29, wherein the first server communicates the analyzed performance data to the web browser interface for display.